Amendments to the Claims

1. (currently amended) A lens array. comprising:

multiple lenses in a monolithic structure, for collecting light from an array of multiple LED light sources;

wherein each LED light source emits divergent light,

wherein for each LED light source there is a lens having a compound shape of at least one curved surface and a flat surface that is distributable around the LED light source and arranged to collimate the light from the LED, and

wherein each lens has a spherical or an aspheric shape relative to its respective LED light source.

2. (currently amended) The lens array of claim 1, wherein ~~the each lens includes a curved surface and a flat surface,~~ the curved surface ~~being~~ is equidistant from the center line of the LED light source and the flat surface ~~being~~ is perpendicular to the center line.

3. (currently amended) The lens array of claim 1, wherein each of the offset spherical or aspheric ~~surfaces~~ shapes are offset from a center line extending through the each LED light source.

4. (previously presented) The lens array of claim 1, wherein each of the lenses is symmetric about a center line extending through each LED light source.

5. (previously presented) The lens array of claim 1, wherein each of the lenses includes sections that collect light from respective portions of each LED light source.

6. (previously presented) The lens array of claim 5, wherein each lens section is optimized for each portion of each LED light source from which each section collects light.

7. (previously presented) The lens array of claim 1, wherein each of the lenses includes an offset aspheric shape.

8. (previously presented) The lens array of claim 7, wherein each of the lenses has a faceted surface that approximates the offset aspheric shape.

9. (previously presented) The lens array of claim 8, wherein each of the faceted surfaces has a symmetrically circular shape.

10. (previously presented) The lens array of claim 8, wherein each of the faceted surfaces has a square tile pattern.

11. (previously presented) The lens array of claim 10, wherein the square tile pattern fully fills a surface of each of the lenses.

12. (previously presented) The lens array of claim 10, wherein the square tile pattern is formed from micro-pyramids.

13.-18. (canceled)

19. (currently amended) The LED module of claim 42 further comprising the predetermined LED array to form an LED module, wherein the lenses have a spherical or an aspheric shape from a center line extending through the LED.

20. (previously presented) The LED module of claim 19 wherein each lens is symmetric about a center line extending through the LED.

21. (canceled))

22. (previously presented) The LED module of claim 19, wherein each section of each lens includes geometry that is optimized for each portion of the LED from which that section of each lens collects light.

23. (previously presented) The LED module of claim 19, wherein each lens includes an offset aspheric shape.

24. (previously presented) The LED module of claim 23, wherein each lens includes a faceted surface that approximates the offset aspheric shape.

25. (previously presented) The LED module of claim 24, wherein the faceted surface of each lens has a symmetrically circular shape.

26. (previously presented) The LED module of claim 24, wherein the faceted surface of each lens has a square tile pattern.

27. (previously presented) The LED module of claim 26, wherein the square tile pattern fully fills a surface of each lens.

28. (original) The LED module of claim 26, wherein the square tile pattern is formed from micro-pyramids.

29. (canceled)

30. (currently amended) A method of manufacturing an LED light module, comprising:

determining a configuration for an array of lenses so that there is a separate lens for each LED,

wherein each lens has a compound shape including a curved surface that is distributed around an LED, and

wherein each lens having a compound shape that includes curved surfaces separated by a flat surface,

the lens being disposed over an LED so that light from each side of the LED is projected into a respective curved surface; and

each curved surface is centered about a radius R extending from a center point that lies directly above an imaginary light point source on each of the LED's sides so that each curved surface is effectively a plano-convex lens centered over a side.

31. (canceled)

32. (previously presented) The method of claim 30, wherein the lens array is monolithically molded.

33. (previously presented) The method of claim 30, wherein each lens in the lens array is fabricated by machining faceted surfaces into the lens array.

34. (previously presented) The method of claim 33, wherein the shape of the lens array is formed by machining a mold using a drill bit-type tool.

35. (previously presented) The method of claim 34, wherein each lens in the lens array is machined using a circularly symmetric pattern.

36. (previously presented) The method of claim 33, wherein the shape of the lens array is formed by machining a mold using a surface lathe, router, or grinder.

37. (previously presented) The method of claim 36, wherein each lens in the lens array is machined using micro-pyramids in a square tile pattern.

38. (previously presented) The method of claim 32, wherein the lens array is formed by molding potting gel.

39. (previously presented) The method of c1aim 30, wherein the lens array is formed of glass.

40. (original) The method of claim 39. wherein each lens in the lens array is circularly symmetric.

41. (original) The method of claim 39, wherein each lens in the lens array is formed of micro-pyramids in a square tile pattern.

42. (previously presented) A lens array comprising:

multiple lenses in a monolithic array structure for collecting light from a predetermined array of multiple LED light sources,

each lens having a compound shape that includes curved surfaces separated by a flat surface;

the lens being disposed over an LED so that light from each side of the LED is projected into a respective curved surface; and

each curved surface is centered about a radius R extending from a center point that lies directly above an imaginary light point source on each of the LED's sides so that each curved surface is effectively a plano-convex lens centered over a side.

43. (previously presented) The lens array as in claim 42 wherein the curved surface is spherical.

44. (previously presented) The lens array as in claim 42 wherein the curved surface is aspherical.

45. (previously presented) The lens array as in claim 42 wherein the curved surface is faceted.

46. (previously presented) The lens array as in claim 42 wherein the curved surface is a micro-pyramid.